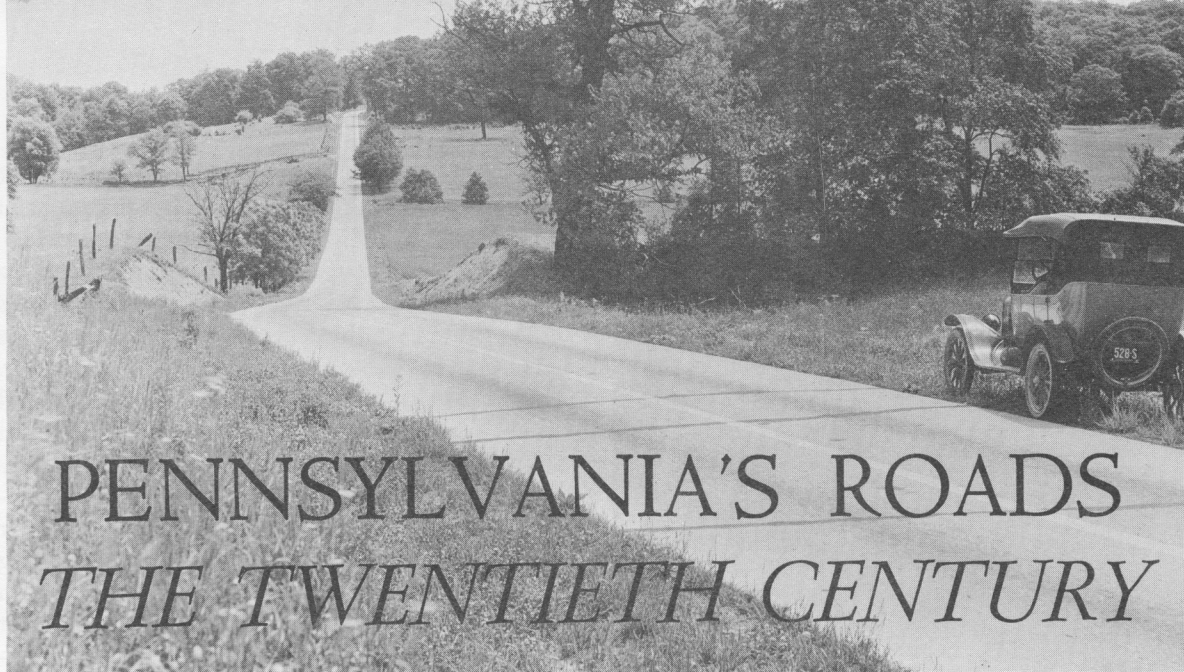




Route 5, later U.S. 322, in Crawford County north of Carlton, 1925.

DURING the 1890's," the automobile historian Ralph Stein has observed, "America's towns were tied to each other by the railroad, not the highway. At the edges of the cities the pavements suddenly disappeared and gave way to mere scratches across the landscape. These were the roads." The reason for this sad state was simple: people who had once used roads extensively now depended on railroads and, for shorter jaunts, electric trolley lines.

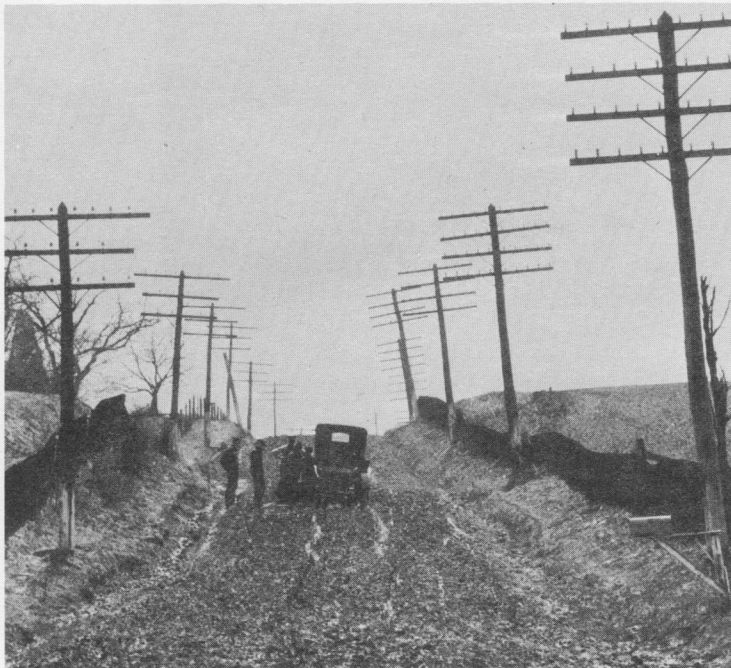
However, a challenge to the supremacy of the iron horse was beginning to take form. In 1893 J. Frank Duryea built America's first successful gasoline-powered automobile. (His brother Charles E. later manufactured motor cars in Reading.) By 1900 about 8,000 motor vehicles were registered in the United States; by 1905, 79,000. In those days motoring in the country often meant struggling through deep ruts or, in wet weather, through rivers of mud. There were no gasoline stations. Crude repairs were often made by the blacksmith or at the bicycle shop, and a motorist whose car had broken down might wait for a horse to tow him to town.

On April 15, 1903, the State Highway Department was created. (The name was changed to the Department of Highways in 1923.) At first the department had no highway mileage, but administered grants to counties, townships, and boroughs for road improvement and maintenance.

Provision was made for the State to pay two-thirds of the cost of reconstruction—in 1905 it became three-fourths—with the balance to be shared by the county and township. An improved highway was to be "a macadamized, or a telford or other stone road, or a road constructed of gravel, cinder, oyster-shells, or other good materials . . . at all seasons of the year [to] be firm, smooth and convenient for travel."

There was, however, a growing conviction that responsibility for highway improvement needed to be more centralized to keep pace with the number of automobiles. On May 31, 1911, the General Assembly set up an 8,835-mile system of roads to be improved and maintained by the State Highway Department. These would be taken over from counties and townships or purchased from private turnpike companies. Some of the many miles still under local government jurisdiction were designated as State-aid highways, for which the State would now pay half of construction costs. By the middle of the decade Pennsylvania had about 98,000 miles of roads, the majority dirt.

Motoring on main highways—with a top speed limit of twenty-five miles an hour—was becoming easier. Not only were cars and tires much superior to those of a decade before, but road conditions were gradually improving. Most highway construction consisted, until many years



This road in South Fayette Township, Allegheny County, was a sea of mud in early April, 1916.

later, of improvements to existing routes. This included widening, the laying of hard surfaces (increasingly concrete or asphalt), and the occasional relocation of short stretches to eliminate especially sharp curves or steep grades. Repair garages and filling stations were becoming more numerous; indeed, what is said to have been the world's first "drive-in" gas station opened in Pittsburgh in 1913.

Two and a half million vehicles were registered in the United States in 1915—over five times as many as a half decade earlier. Pressure increased for federal aid to the states for road building, and on July 11, 1916, President Wilson signed the Federal Aid Road Act. The declared intent of this measure was to promote farm-to-market communication. It provided for grants to the states for the construction of "rural public roads," defined as "any public road over which the United States mails now are or may hereafter be transported." Then, in 1921, the Federal Highway Act provided that up to seven per cent of non-urban road mileage in each state be designated as "primary" and eligible for fifty per cent federal assistance. These two acts set a pattern for federal-state co-operation in road building which has endured.

The Twenties was a period of quickening prog-

ress, with greatest emphasis still on improvement of the main through routes. The first official Pennsylvania highway map, issued in 1925, shows that principal traffic arteries were for the most part paved, as were the secondary roads of the State's southeastern corner. America was becoming the motorized nation we know today. The number of persons traveling by railroad and trolley was starting to decline. Congestion and traffic were becoming serious problems on city streets. Families on weekend drives to the country were choking the two-lane roads on their return. Principal highways, far from bypassing towns and cities, generally followed their main streets into the central business sections—a fact that was regarded with satisfaction by civic leaders. The maximum speed limit on the open highway had risen to forty miles an hour by 1929; in town it was twenty. Increasing in numbers were roadside restaurants and filling stations, as well as tourist homes (private houses with accommodations for travelers) in the towns, and tourist courts or "cabins" on the outskirts. These, like the downtown hotels, and occasional taverns remaining from an earlier day, were almost invariably locally owned and partook of the particular character of their localities.

Pennsylvania writers and publicists sang the praises of the State's "picturesque" highways. Maps and guide books, in which hotels adver-



Workmen pave a road in Eden Township, Lancaster County, 1908.

tised prominently, were furnished by automobile clubs and publicity offices. Pennsylvania's improved highways, wrote John T. Faris in 1927,

... make easy the access of all who will to the treasures of beauty and scenery, to the forests, the lakes, the rivers, the mountains. Merely to think of the long stretches of perfect surface on the Susquehanna Trail, the Lackawanna Trail, the Lincoln Highway, the William Penn Highway, and a dozen other arteries, is to long for the touch of the hand on the steering wheel and the pressure of the foot on the gas.

Outstanding was the Lincoln Highway, connecting the State's two largest cities. Stretching from New York to San Francisco, this route was proclaimed in 1913 by the Lincoln Highway Association, which fostered its improvement. By 1928 the transcontinental system of U.S.-numbered through highways was in use in Pennsylvania, and at about the same time, an expanded State-numbered system came into being.

Campaigning for the governorship in 1930, the noted forester and progressive Gifford Pinchot promised to "get the farmers out of the mud." The following year, after Pinchot had taken office, the State took over 20,156 miles of township roads and began paving them, using light construction costing less than \$7,000 a mile. As the depression deepened during 1931, this road-building program, through the use of a minimum of machinery and a maximum of hand labor, became an important means of providing work relief.

Special federal programs also benefited the State's highways during depression years. Thus an allocation of National Industrial Recovery highway funds in 1933 amounted to almost \$19,000,000. Beginning late in 1935 and continuing for the next seven years, men were assigned to various Pennsylvania road projects under the work-relief program of the WPA (Works Progress Administration). A high of 143,000 men was thus engaged in November, 1938.

The most important single highway development of the late Thirties was the creation, May 21, 1937, of the Pennsylvania Turnpike Commission. With a \$29,250,000 federal grant and



Traffic on U.S. 30 in Ardmore, 1931.

a \$40,800,000 purchase of Turnpike bonds by the federal government's Reconstruction Finance Corporation, construction began late in 1938. On October 1, 1940, the first long-distance super-highway in America opened, a 160-mile, four-lane toll road from Middlesex (west of Harrisburg) to Irwin (east of Pittsburgh). Whereas motorists crossing the mountains on U.S. 30 had climbed an accumulated 13,880 feet up nine per cent grades, Turnpike travelers climbed a mere 3,900 feet on three per cent grades.

America's entry into World War II ended the production of civilian cars and trucks, brought gasoline rationing, and reduced speed limits to thirty-five miles to conserve fuel. Built for higher speeds, the Pennsylvania Turnpike was now used largely to transport military men, munitions, and equipment. In 1943, traffic on other roads was less than half what it had been two years earlier.

With the end of wartime controls, traffic volume returned to and then exceeded pre-war levels. New rights-of-way were mapped out and cities and towns were bypassed to facilitate high-speed traffic. Such projects included the Penn-Lincoln Parkway in Pittsburgh, the Schuylkill Expressway into Philadelphia, the new U.S. 22 connecting Harrisburg and Easton, and the Harrisburg-York Expressway. Among the major post-war improvements were the extensions of the Turnpike to Valley Forge in 1950, the Ohio line in 1951, the Delaware River in 1954, and Scranton in 1957. The Turnpike was joined by the New Jersey and Ohio turnpikes to form part

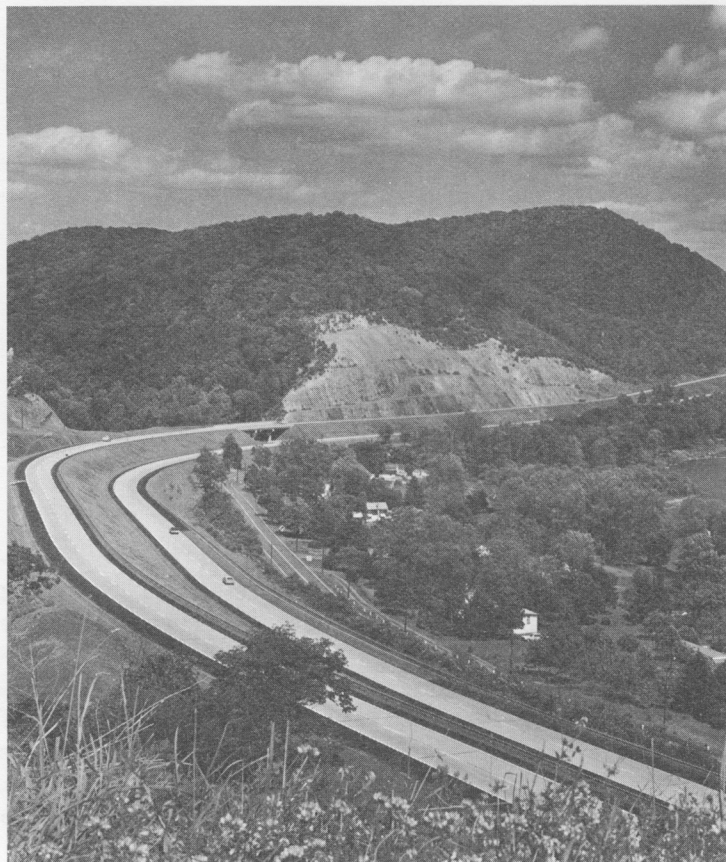
of a high-speed toll road connecting New York and Chicago.

The Federal Highway Act of 1956 established a new 41,000-mile National System of Interstate and Defense Highways, commonly known as the Interstate system. Ninety per cent of the cost of constructing toll-free highways in the system was to be paid by the federal government. These are all limited-access highways, built with four lanes or more and with gentle curves and easy grades. The construction costs for Pennsylvania's 1,576 miles have ranged from a million dollars a mile through rural areas to several times that around Philadelphia and Pittsburgh. The most celebrated is probably the 313-mile Interstate 80, known as the Keystone Shortway, part of a 2,899-mile Interstate highway between New York and San Francisco.

Outside the Interstate system, some 500 miles of Pennsylvania roads had by the early seventies been designated by the Appalachian Regional Commission as corridors for two- and four-lane Appalachian Development Highways. These highways are intended to attract industry into the areas they serve.

By the opening of the nineteen-seventies there were 113,000 miles of roads and streets in Pennsylvania. The Department of Highways had responsibility for some 44,000 miles, the townships about 49,000 miles. The number of motor vehicles registered in Pennsylvania in 1970 was 5.8 million—two and a half times the 1949 figure—and it was estimated that 8.4 million licensed drivers would operate some 7.6 million vehicles by 1990. Highway travel accounts for about ninety-five per cent of Pennsylvania's intercity traffic. Concern has been increasingly expressed about traffic congestion, pollution, the inadequacy of public transportation, and the need for alternatives to new freeways in built-up areas.

Two developments have occurred which help point the direction for the future. One is the creation on July 1, 1970, of a Department of Transportation (supplanting the Department of Highways) and a State Transportation Commission. Another is the establishment of proced-



U.S. 22 and 322, on the Juniata River, has been transformed into a scenic four-lane highway in Perry and Juniata counties. Note a stretch of the old two-lane highway beside it.

ures, by federal and State legislation, for determining the environmental impact of proposed highway projects and for minimizing any adverse effects before such projects are approved. Thus, concrete recognition has been given to two increasingly accepted principles. First, highway development should be carried out not apart from or in competition with other forms of transport but as a part of a *balanced* transportation system. Second, the finished highway should be in *harmony* with the total environment, whether rural or urban.

The future may bring new means of locomotion impossible now for us to visualize. But so long as there are cities and valleys and mountains and horizons in Pennsylvania, and so long as there are people with the need and the desire to travel forth, there will be roads—different though they may be from the roads of today.